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*SISYMBRIUM LLATASII*  
AND *S. MORRISONII*  
(BRASSICACEAE),  
NEW SPECIES FROM  
COASTAL PERU

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The genus *Sisymbrium* L. includes more than 90 species and is most highly diversified in South America, where nearly half of the species grow (Al-Shehbaz, 1988). It was treated on a worldwide basis by Schulz (1924) and has been recently revised for Argentina by Romanczuk (1982). Although several South American species remain to be described, the major taxonomic difficulty in *Sisymbrium* involves generic boundaries. The genus is highly heterogeneous and consists of several lineages of poorly understood phylogenetic interrelationships. Schulz (1924) recognized these lineages as independent genera on the basis of minor morphological differences. I have adopted in this paper and elsewhere (Al-Shehbaz, 1988, 1989) a somewhat broad generic concept of *Sisymbrium*, and I believe that most of Schulz's (1924) South American segregates might not merit recognition.

***Sisymbrium llatasii*** Al-Shehbaz, sp. nov. TYPE: Peru. Lambayeque: Cerro Reque, 580 m, 28 Sep. 1986, *S. Llatas Quiroz 2102* (holotype, F; isotype, GH). Figure 1.

Herba annua glabra, 0.2–0.8 m alta; folia caulina petiolata, oblonga vel lanceolata, obtusa vel subacuta, repanda vel dentata, 2.5–7 cm longa, 0.7–2.5 cm lata; sepala oblonga, patula, 3.5–4 mm longa; petala late obovata, alba vel lilacina, nonunguiculata, apice rotunda, basi cuneata, 6–7 mm longa, 3.5–4 mm lata; pedicelli fructiferi recti, divaricati, 9–13 mm longi; siliquae teretes, anguste lineares, 2.1–3.9 cm longae, 1.7–2 mm latae; styli 0.5–1 mm longi; semina biseriata, oblongo-ovata, 1–1.2 mm longa, 0.8–0.9 mm lata.

Glabrous annual herb. Stems erect, 0.2–0.8 m high, branched above and below. Cauline leaves petiolate, glabrous, oblong to lanceolate, obtuse to subacute at apex, repand to obscurely dentate, cuneate at base, 2.5–7 cm long, 0.7–2.5 cm wide, gradually reduced in size upward; petioles 1–2 cm long. Inflorescences ebracteate, corymbose racemes, elongated and lax in fruit. Sepals oblong, spreading, caducous, glabrous, narrowly scarious at margin, 3.5–4 mm long, 1.7–2 mm wide. Petals white to lavender, dark-veined, broadly obovate, not clawed, rounded at apex, cuneate at base, 6–

7 mm long, 3.5–4 mm wide. Stamens slightly tetradynamous; filaments erect, white, 3–3.7 mm long; anthers oblong, sagittate at base, recurved at apex after dehiscence, 0.7–0.9 mm long. Nectar glands well developed, confluent, ringlike, surrounding bases of lateral stamens, subtending those of median ones. Fruiting pedicels divaricate to somewhat ascending, straight, glabrous, slender, much narrower than fruits, 9–13 mm long. Fruits terete, narrowly linear, straight, obscurely torulose, subsessile, 2.1–3.9 cm long, 1.7–2 mm wide; valves glabrous, rounded at both ends, with a conspicuous midvein and obscure lateral veins; style 0.5–1 mm long; stigma slightly 2-lobed; septum hyaline, not veined. Seeds oblong-ovate, orange-brown, coarsely reticulate, biserially arranged, 1–1.2 mm long, 0.8–0.9 mm wide; cotyledons incumbent.

*Additional specimen examined.* PERU. LAMBAYEQUE: Chiclayo, Cerro Reque, 540 m, 24 Oct. 1978, *S. Llatas [Quiroz] 331* (NY).

*Sisymbrium llatasii*, which is named after its collector, resembles and perhaps is related to *S. litorale* Philippi, a species endemic to central Chile near Concepción. *Sisymbrium llatasii* is an annual with obscurely dentate to repand leaves, broadly obovate petals, slender fruiting pedicels 9–13 mm long, slender fruits to 2 mm wide, and biseriata, orange-brown seeds 1–1.2 mm long. In contrast, *S. litorale* is a suffruticose perennial with serrulate-denticulate leaves, oblong-spatulate petals, stout fruiting pedicels 2–3 cm long, stout fruits, and uniseriate, dark reddish brown seeds ca. 2 mm long. Both are coastal, narrowly endemic species that are separated from one another by some 3,400 air kilometers.

***Sisymbrium morrisonii*** Al-Shehbaz, sp. nov. TYPE: Peru. Arequipa: 8 km S of Mollendo, silty flat, near sea, base of uplifted conglomerate bench, 28 Sep. 1938, *C. R. Worth & J. L. Morrison 15729* (holotype, UC; photocopy, A). Figure 2.

Herba perennis basi lignosa, pili densis minutis 0.1–0.3 mm longis; folia caulina lanceolata vel ovata, petiolata,



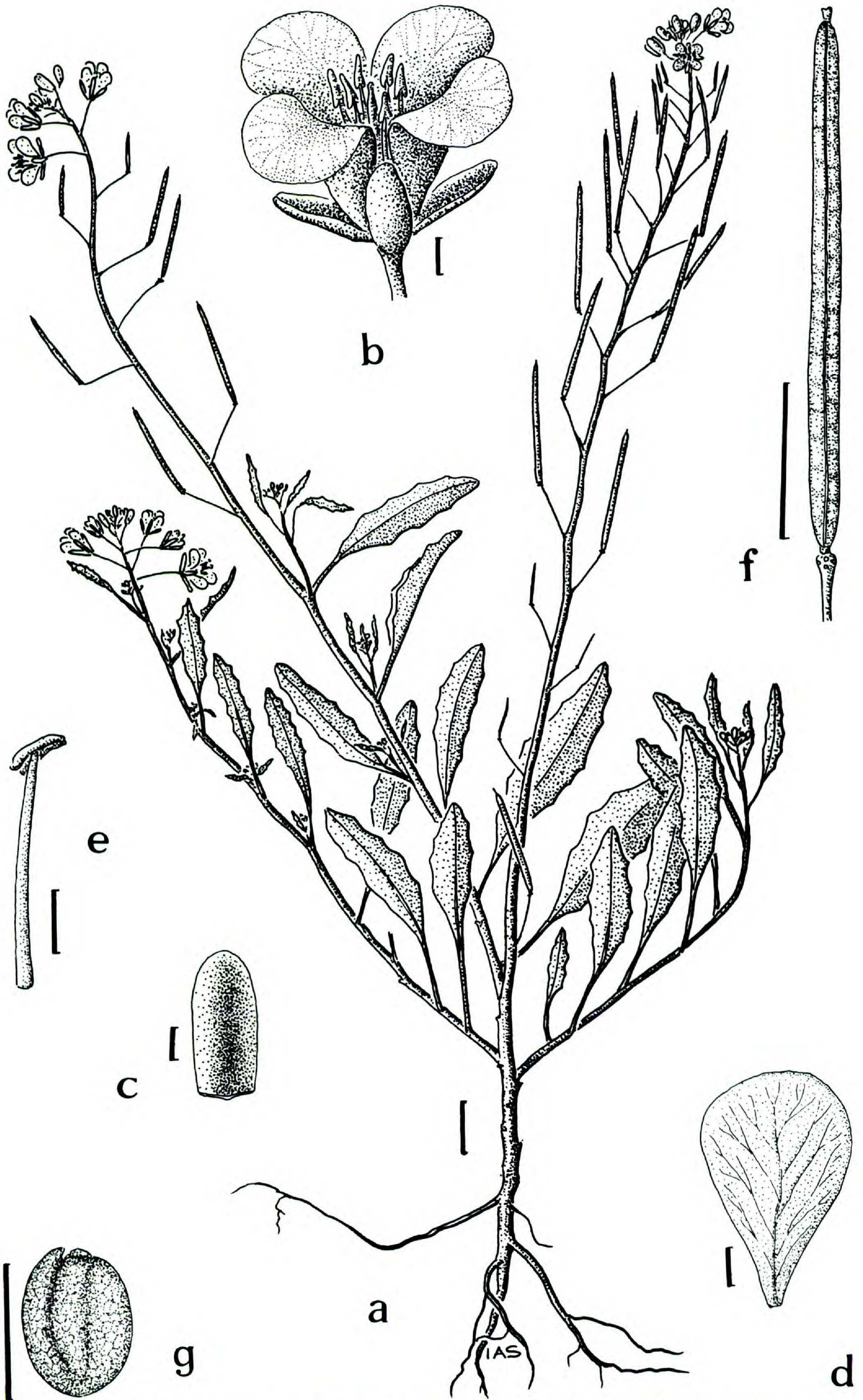


FIGURE 1. *Sisymbrium llatasii*. — a. Plant. — b. Flower. — c. Sepal. — d. Petal. — e. Stamen. — f. Fruit. — g. Seed. Scales a, f = 1 cm; b-e, g = 1 mm. Drawn from the holotype by the author.



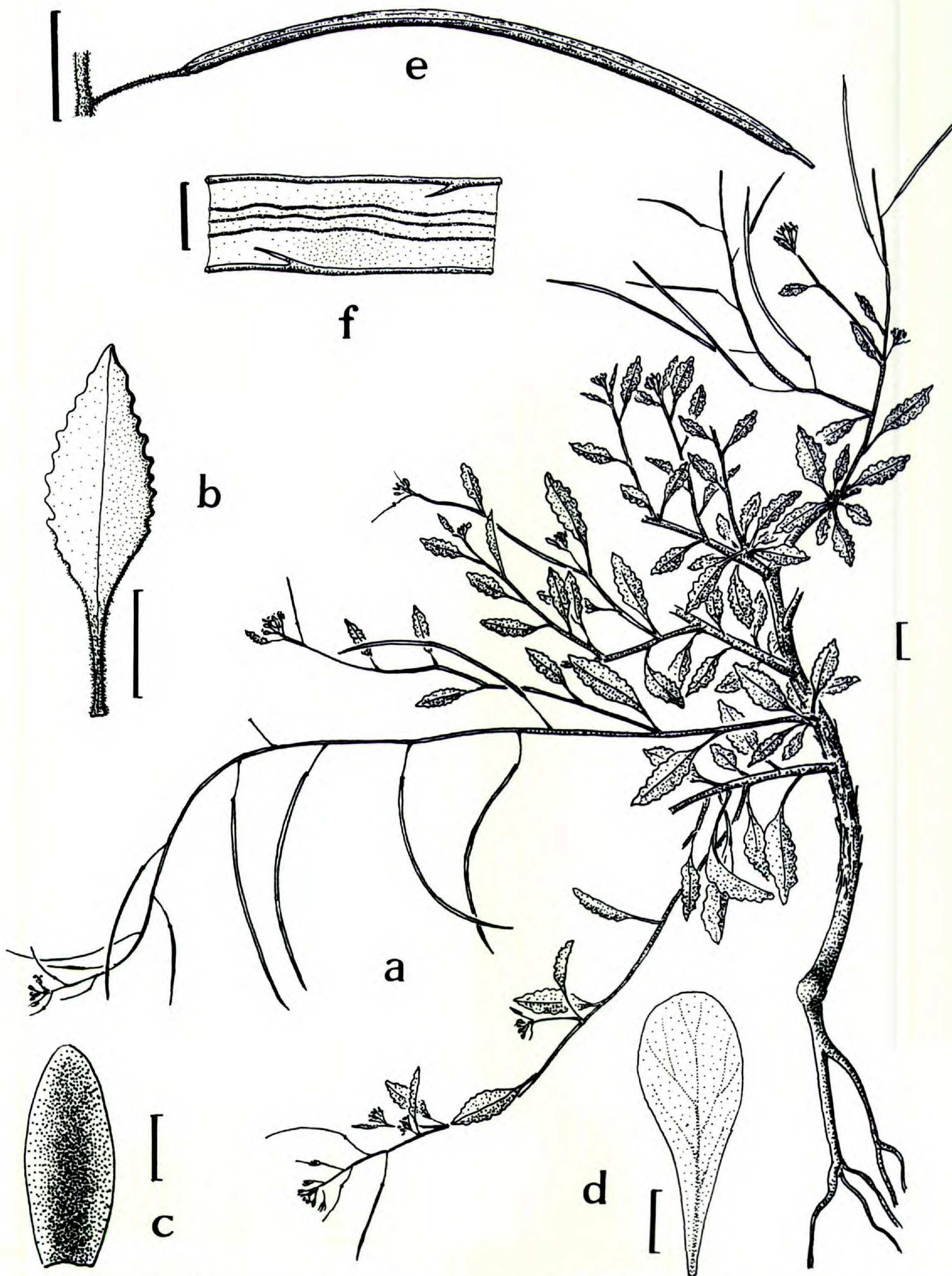


FIGURE 2. *Sisymbrium morrisonii*. —a. Plant.—b. Leaf.—c. Sepal.—d. Petal.—e. Fruit.—f. Portion of replum and septum showing venation. Scales a, b, e = 1 cm; c, d, f = 1 mm. Drawn from the holotype by the author.



dentata vel repanda, cuneata, 2–4 cm longa, 0.5–1.5 cm lata; racemi ebracteati; sepala oblonga, erecta, glabra, 3.5–4 mm longa; petala alba, spathulata, 5–5.5 mm longa; pedicelli fructiferi recti, divaricati, 8–13 mm longi; siliquae teretes, anguste lineares, subfalcatæ, glabrae, 5–6.8 cm longae, 1.4–1.6 mm latae; septum trinervium; styli tenues, 1–2 mm longi; semina oblonga, uniseriata, 1.4–1.6 mm longa, 0.9–1 mm lata.

Perennial herb. Stem woody at base, annually producing herbaceous stems 10–25 cm high, densely and minutely pubescent with short, stiff trichomes 0.1–0.3 mm long. Cauline leaves petiolate, ovate to lanceolate, dentate to repand, cuneate at base, subacute at apex, 2–4 cm long, 0.5–1.5 cm wide, reduced in size upward, densely pubescent along the petioles, sparsely so along the midrib and margins, glabrescent on both surfaces. Inflorescences ebracteate, corymbose racemes, elongated considerably in fruit. Sepals oblong, erect, caducous, glabrous, nonsaccate, 3.5–4 mm long, ca. 1.5 mm wide. Petals white, spatulate, narrowed to a clawlike base, 5–5.5 mm long, ca. 1.8 mm wide. Stamens erect, slightly tetradynamous; filaments 3.5–4 mm long; anthers oblong, sagittate at base, ca. 0.8 mm long. Nectar glands confluent, ringlike, subtending the bases of filaments. Fruiting pedicels divaricate, straight, pubescent, slender and much narrower than fruits, 8–13 mm long. Fruits terete, narrowly linear, somewhat falcate, divaricate to ascending, 5–6.8 cm long, 1.4–1.6 mm wide; valves glabrous, smooth, conspicuously 3-veined; septum complete, prominently 3-veined; style slender, 1–2 mm long; stigma subentire. Seeds oblong, coarsely reticulate, uniseriately arranged, 1.4–1.6 mm long, 0.9–1 mm wide.

*Sisymbrium morrisonii* is named after John L. Morrison, a student of the Brassicaceae and one of the collectors of the holotype. It is closely related to the Peruvian endemic *S. gracile* Wedd. (= *S. macrorrhizum* (Muschler) J. F. Macbr.), from which it differs in having undivided leaves, larger flowers,

slender styles, and longer fruits. *Sisymbrium gracile* has pinnatifid to pinnatisect middle leaves, smaller flowers, obsolete to stout styles less than 1 mm long, and fruits 3–4(4.5) mm long. Schulz (1924, 1936) segregated the latter (as *S. macrorrhizum*) to *Phlebiophragmus* O. E. Schulz, which he distinguished from *Sisymbrium* solely on the basis of having 2- to 4-veined instead of 1-veined or veinless septa. However, this feature is unreliable and does not justify recognition of *Phlebiophragmus* as an independent genus.

*Sisymbrium morrisonii* is also related to the Peruvian *S. oleraceum* O. E. Schulz. The latter has shorter fruits 4–4.5 mm long, glabrous stems and leaves, yellow petals to 6.5 mm long, and stout styles less than 1 mm long.

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